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BULLETIN

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STEREOSCOPIC VISION SYSTEM

DTIC

ELECTE

OCT 14 1993

Technical Specifications

Background. InDepth Systems Limited of Nottingham, UK, has developed the IDS 2000 3-D television system. It is designed for general industrial, machine vision, security surveillance, and research applications. The system uses standard video components throughout and is capable of supplying 2-D and 3-D images, either of which can be recorded on standard VCR equipment.

Description. The heart of the system is the "Stereo-Camera," which consists of an optical module and an electronic module driving a pair of matched CCD imaging chips in synchronism.

Liquid crystal "Viewing Glasses" (two pairs) are supplied as standard. Other viewing options can be supplied for certain specialist applications.

The complete system is powered and controlled by the "3-D Camera Controller," whose push-button controls allow changes in the optical setup of the camera to be made as the selection of left- or right-perspective 2-D images or a full 3-D image. Controls are also available for a pan and tilt facility (which is an optional extra) and, in addition, a spare auxiliary control is available for specific customer applications.

The IDS 2000 system has been used in remotely operated vehicles for bomb disposal, manipulator arm control, general and covert surveillance, observation, and manipulation in hazardous environments. The manufacturer states that the system can be housed in pressureproof housings for underwater work and that a color system is being developed.

For further information contact InDepth Systems Limited, 8 Heathcoat Building, Highfields Science Park, University Boulevard, Nottingham NG7 2QJ, UK. Telephone (602) 430828.

ONREUR point of contact: CDR R. H. Taylor, USN, Undersea Systems Officer.

Distribution:

Standard
Diver/Special Warfare
Ordnance

Robotics
Submarine
Surface Ship

Stereo-camera (monochrome)

Imagers Pulnix 540/560 — 2/3" format CCD interline transfer
CCIR NTSC
Pixel resolution 500(H)x582(V) 510(H)x492(V)
TV resolution (lines) 370(H)x420(V) 370(H)x350(V)
Scanning 50Hz 60Hz
(2:1 interlace)
Video output 1.0 Vp-p composite video, sync. negative
Gamma 0.45 (standard)
A.G.C. 12 dB
Stereo convergence point infinitely variable from 0.5 m to infinity
Iris remote control (parallel tracking)
Lenses (C-mount) 8.5 mm or 16 mm or 25 mm standard
(specify with order)
Weight 1.2 kg (approx)

Both imaging chips are driven in synchronism by a single electronic drive module.

Control console

DTIC QUALITY INSPECTED 2

Contains main system control electronics and function switching facilities.
Length 400 mm
Width 205 mm
Height 75 mm sloping to 30 mm

Control functions

Image selection left (2-D), right (2-D), or 3-D
Convergence far, near
Iris open, close
Pan left, right
Tilt up, down
Auxiliary spare control line
Spectacle drive two drive sockets provided as standard
Viewing spectacles two pairs, liquid crystal type.
Power requirements 18 V dc - 20 V dc, 0.5 A (max)
(power supply module provided as standard)

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Availability Codes

Avail and/or Special

Dist

A-1

Approved for public release

Distribution Statement

93-23928

